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JPRS L/9555

18 February 1981

Latin America Report

(FOUO 4/81)



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LATIN AMERICA REPORT

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COUNTRY SECTION

BRAZIL

REAGAN'S 'TOUGH TALK' ON USSR ANALYZED

PY031041 Rio de Janeiro LATIN AMERICA DAILY POST in English 1 Feb 81 p 4

[Editorial: "Tough Talk"]

[Text] This was a week for tough talk from Washington by the Reagan administration about international affairs. Reagan wasted no time to level big verbal guns at the Russians.

He characterized them as liars and cheats and criminals in their willingness to keep international plots brewing. Secretary of State Alexander Haig, meanwhile, gave it to the Iranians. No weapons, he told them, not even those they had bought before the boycott. Haig also laid into the Cubans and the Russians.

So, it's no more mister nice guy in Washington, if the statements from the White House and the Department of State hold up. Jimmy Carter's olive branch approach seems dead. Cold war words are the order of the day.

But is the rhetoric a blind for a negotiating stance? Is the harsh language preparatory to setting the stage for some kind of pursuit of detente with Russia and at least a working relationship with Iran?

It just might be. In that case, Reagan and Haig are playing a tactical game that is radically different than the one used by Carter. Carter's signals on international affairs were generally public and mild. His technique was to be reasonable at least for most of his presidency.

Reagan may or may not be blustering when he calls the Russians criminals and cheats and liars. He is trying to show by words that the United States has found new self-respect. But this must be backed up. Soviet leaders are not too concerned about harsh words and they probably can recognize that Reagan's electoral mandate to put on the tough-guy act was necessary.

It is through the private signals that there will be an improvement or deterioration of relations. Was Reagan simply mouthing a gut reaction, off-the-cuff remark or was his comment a carefully considered policy decision? Haig's statements were precise, calculated; Reagan left the impression that he was inexperienced.

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Those are the kinds of signals that might confuse both friends and enemies and the United States will have to clarify them to both sides if it wants its policies understood. Will there be a deterioration in U.S.-Soviet relations, sparked by the Reagan-Haig remarks, or will there be behind-the-scenes efforts to get talks underway? It is just possible that the real policy objectives of the Reagan administration are not nearly so tough as they were made to appear to be this week in Washington.

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COUNTRY SECTION

BRAZIL

PAPER WARNS U.S. AGAINST REDUCTION IN FOREIGN AID

PY042224 Rio De Janeiro LATIN AMERICA DAILY POST in English 4 Feb 81 p 4

[Editorial: "Aid Threat"]

[Text] The details will be emerging in the next few days. But it seems as if the Ronald Reagan cost-slashing orgy almost went too far too fast; much of America's foreign aid was going to get the knife in the worst of ways.

When the news leaked last week that budget director David A. Stockman was going to ax many of the U.S. foreign aid programs, the U.S. State Department headed by Alexander Haig rode into the gap. Under intense pressure, Stockman apparently had backed off from his original proposals which would have denuded America's foreign aid budget and, in effect, caused the U.S. to welsh on many of its foreign aid commitments.

Now that the revolution has come with Reagan in office, and Stockman wielding the ax, there are many sectors in many areas of the U.S. which will find themselves without expected federal funding. That's what the American public voted for when they pulled the lever for Reagan, and Stockman's the boy to do it.

Foreign aid is an unusually easy target for American budget cutters to take aim at. Foreigners don't vote in American elections. Aid is considered to be a "charitable" donation by most Americans, and if it is a question of giving it away to others rather than using it at home, then it is pretty clear where public opinion will rest.

What we heard is that Stockman wanted to chop the foreign aid suggested by former President Jimmy Carter (\$8 billion in fiscal 1982) by about one-quarter. Mostly affected would be contributions to a program called the International Development Association, which is managed by the World Bank and makes low-interest loans to the world's poorest countries. The problem is that if the U.S. doesn't live up to its pledges quota, other nations also would be released from their pledges--and IDA would go down the drain.

That, we suggest, is in no way in the best interests of the U.S. or the Western world.

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By welching on its IDA pledges (and many of its other pledged contributions, such as to the Inter-American Development Bank), the U.S. will help destroy the industrialized community's foreign aid programs, which are unquestionably necessary in today's interrelated world. The U.S. will lose its voice in the big institutions such as the International Monetary Fund and the World Bank, which would tend to swing toward a critical view of America, much the way the United Nations has. The cutoff of aid could have disastrous consequences for poor nations and the hundreds of millions of citizens who live in them.

Other principal donor nations such as West Germany, Australia, Canada, Japan and the European Economic Community would consider any major U.S. cutback in these aid programs as a breach of faith. All understand that such measures would work against U.S. interests in the long run.

The U.S. must maintain a level of foreign aid that is adequate to its foreign policy goals. If Stockman gets his way, the U.S. could soon become a minor player on the international scene. We don't think that was what Ronald Reagan had in mind when he was inaugurated last month. Reason, we hope, will prevail and the U.S. will honor its foreign aid commitments. Perhaps the proposed cuts were made by an overzealous bureaucrat who was in office for less than a week; but if not, then they were the work of an irresponsible officer holder who has no concept whatever of the importance of the U.S. role in the world and the need for a continued presence through foreign aid.

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COUNTRY SECTION

CUBA

HEALTH CARE RESULTS FOR LAST 5 YEARS REPORTED

Havana BOHEMIA in Spanish 12 Dec 80 pp 4-11

[Text] The second party congress is approaching, and at this gathering the public health sector, like all the others in the country, must submit a report on the developments in this important and necessary branch in the 5-year period just ending. The tasks which this period posed for the public health workers were numerous, and both the central organization and its trade union and all of the personnel in general had to deal with various problems which persisted in one of the sectors most directly involved with our population. On various occasions our commander in chief spoke about them, and now today it is possible to speak with true satisfaction of the upsurge in quality which has occurred in this 5-year period.

The successes achieved in these 5 years are notable, and they occurred as a direct function of the service the health sector is providing to our people. This article is designed precisely to assess what these achievements have been.

Let us first examine one of the nerve points in this sector, and one in which it has been necessary to do arduous work to attain real success. We are speaking of mother-infant care and nursing.

Achievements in Mother-Infant Care

An index which reveals the good work done is the percentage of infants born alive in institutions, since from the already-high figure of 97.6 percent in 1974, there was an increase to 98.3 in 1979. The birth rate dropped from 22.1 per thousand inhabitants at the beginning of the 5-year period to 14.7 in 1979, as a result in large part of the birth control activities included in the national mother-infant care program.

Another important index of which our country can be proud today is the infant mortality rate, which dropped from 29.3 to 19.3 per thousand live births, a 10-percent decline in the rate. Actually this percentage represents a decline of 34 percent in this period, which in absolute figures means nothing less than 3,173 fewer deaths. Meanwhile, the perinatal mortality rate per thousand live births dropped in this 5-year period from 28.8 to 23.9. All of its components, including late foetal and early neonatal deaths, decreased by 1.5 and 29.5 percent respectively, which in specific figures also gives us an incredible 2,414 fewer deaths.

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The role of newborn infant care units in births also increased, as can be seen by comparing the fact that in 1974, of the 198,258 children born in institutions, 135,078 (68 percent) of the births were in hospitals or obstetrical services with newborn infant care units, while of 141,098 live births in institutions in 1979, 112,268 occurred in units of this type, or 79.6 percent. Thus there has been an increase of 11.5 percent.

Now let us examine how the main causes of death in infants under 1 year develop. We find that the rate for diseases involving acute diarrhea dropped from 2.9 per thousand live births to 1.0 percent, a reduction of 65.5 percent. It would be well to note that such diseases, which rank among the leading causes of infant mortality prior to the revolution and for some years afterward, currently do not appear among the 10 leading causes of death (total mortality), nor among the 5 leading causes for school-age children. In 1974 there were 605 deaths from this cause in infants under a year, while in 1979 there were only 140.

Acute respiratory ailments also showed a decline in rate from 3.4 to 1.5 per thousand live births, with 695 deaths from this cause in 1974 and only 222 in 1979. Meanwhile, perinatal diseases (those occurring at the time of death) showed a reduction of 26.3 percent, with a decline in the mortality rate from 17.9 to 9.5 per thousand live births. This represents more than 1,200 lives, since in 1974 there were 2,642 deaths from these causes and only 1,363 in 1979.

The mortality index for the preschool years (from 1 to 4) dropped from 1.2 to 1.0 percent in this period, a reduction of 16.7 percent.

Maternal mortality per 10,000 live births dropped from 5.6 in 1974 to 4.7 in 1979. This represented a decline of 40 percent during the period, since at the beginning of the 5 years there were 114 deaths, while no more than 68 occurred in 1979.

It must be said that these achievements in the maternal-infant sector have been achieved thanks to a real effort, if we note for example that at the beginning of the 5-year period, there were 9 doctor's examinations per birth while the figure is now 11. Good immunization has also contributed. A total of 328,253 doses of BCG (vaccine against tuberculosis) were administered in 1979, an increase of 31,079 over 1974. Also in 1979 a mass vaccination campaign was carried out with the cooperation of the FMC [Federation of Cuban Women], covering the 0-to-5-year age group, resulting in an immunization level of 92.9 percent with the triple DPT vaccine and 81.6 percent for vaccination against measles. Currently, the newborn are being kept free of malaria, diphtheria, poliomyelitis and tetanus. In 1979 there were 6 deaths from measles and 3 from whooping cough, and in the last 10 years only 3 infants have died of diphtheria. Not a single case of tetanus in the newborn has been reported since 1972, and the rate for tuberculosis in children under 15 years of age was 1.6 per thousand inhabitants in 1979.

Achievements in Nursing

In the years between 1975 and 1980 the successes achieved by nursing personnel, one of the sectors which revealed serious problems, have been noticeable. The development of nursing is evident when we look into the figures revealing the qualitative and quantitative changes in this specialty in our country.

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A total of 26,457 workers was reached in this 5-year period, and the qualitative change in the aide-nurse ratio was 1.58 per nurse in 1975, while today it is 0.5 aides per nurse, showing the increase in more skilled personnel, reflecting the aides who annually increase their technical qualifications by enrolling in level-2 courses (lasting 2 years) to complete their training as nurses.

On all organizational levels there has been motivation for male and female nurses to specialize on the basis of the levels achieved in the 1-year post-basic courses, focused on the following subjects: anesthesia, intensive care, newborn care, teaching and administration. In 1978 a specialized course for personnel working in surgical units was offered with a view to raising the level of nursing care in the phases prior to, during and after surgery.

In 1976, the development of the licentiate specialty on a higher level marked the beginning of a new stage, raising the nursing levels to four: licentiate in nursing, specialized nurse, nurse and nurse's aide. In 1980, the first 10 licentiates graduated. There is currently a nursing class of 167 studying for the licentiate.

In 1966 a nursing association was also established with a view to bringing nurses together for scientific development, with the holding of various events, outstanding among which was the first nursing congress in the month of May 1980, with participants from other nations. The special nursing emulation has been an important factor in raising the level of concentration and improving labor discipline. The technical assistance provided by such personnel on international missions has been increasing and the work they have done is praiseworthy.

The application of the new wage scale to nursing personnel has contributed considerably, serving as an incentive for work, placing nurses among the technicians given priority in the country. Another incentive has been the new uniform, as well as the possibility of acquiring other facilities needed for the execution of this important function.

Hospital Care

Let us examine the developments in a sector which is truly important for providing good health service to the people: hospital care. In this sector the advance has been great, really great, in this 5-year period: in these years 4 large hospitals were completed, adding 2,601 to the already-existing beds. One is in Cienfuegos, with 616 beds, another in Las Tunas, with 629, and one in Guantanamo with a total of 750 beds. The fourth is in Manzanillo, with 616 beds. In addition, expansion was undertaken at the Frank Pais Hospital (city of Havana, with an additional 200 beds), and the Heroes of Baire Hospital (Isle of Youth, with 200 beds). With the completion and expansion of various hospitals, the number of beds added was 3,011.

Currently 11 hospitals throughout the country are in various stages of construction. They will increase the total number of beds in the coming 5-year period by 5,596 when this work is completed. It should be noted that in 1979, the country already had 44,004 beds for hospital care.

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In addition, the medical tools and instruments at many hospitals were added to and modernized, and the situation and organization of the guard corps were improved and the specialized medical staff of hospitals increased.

Where the polyclinics are concerned, it should be noted that the network of these health centers was expanded, with the building and commissioning of a total of 59 in the 5-year period. The doctor-patient relationship was improved with the assignment of a permanent physician for the inhabitants of each sector, and also a considerable number of units for physical therapy care and rehabilitation were developed.

Currently, the new community medical care model, which was only offered in about a dozen polyclinics, involves 76 percent of the units (256). Also, the development of interconsultations in certain hospital specialties has been established, such that in case of need the patient is seen in the polyclinic itself, with his doctor in attendance.

Achievements in Dentistry

Another branch in the public health sector which had some professional and technical personnel problems at the beginning of the 5-year period, as well as in office premises, was dentistry. However, in the course of this period these problems were resolved, making a great increase in this type of service possible. The figures are eloquent. In 1975, for example, dental visits for basic services totaled 5,826,000, while the total for 1979 was 6,839,000. At the beginning of the 5-year period there were 64,000 cases of oral surgery, while in 1979 there were 86,000. Also in 1979 there were 267,000 visits for various services which were not provided in 1975. Increases in dental services such as endodontology, periodontology, orthodontics, dental prostheses and basic consultations came to a total of 1,084,500 in 1979. Fillings for that year totaled 5,755,000, and extractions 2,653,000. All of this gives a picture of how serious the work done by our dentists in this 5-year period has been.

Dental services were not limited to the dental polyclinics alone, but were also provided at hospitals and at schools and the ESBEC [Basic Secondary Farm Schools]. In 1975, for example, the fillings and extractions done at primary schools totaled 599,000 and 146,000, respectively, while the totals for 1979 were 903,000 fillings and 292,000 extractions. To this must be added the care provided in the ESBEC, with 85,000 students seen, 470,000 fillings, 58,000 extractions and 72 patients dismissed. It should be noted that these services were provided in some cases in the past 5 years.

All of this has been achieved thanks to the fact that there has been an increase in human resources in dentistry, including general dentists, specialists in health administration, orthodontics, periodontology, maxillofacial surgery and prostheses, clinical dentistry and prosthetic technicians, and dental aides.

A contribution was made in turn to this sector by the building of community polyclinics which have 5, 9 and 10-chair dental departments, depending on the model, and also clinics have been built for specialties with 20 chairs, according to the prototypes, and a prosthesis laboratory for each of them.

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To these facilities for providing better service it should be added that the hospitals with 300 and 600 beds which have been inaugurated have dental clinics with 13 and 14 chairs, respectively, in the outpatient departments.

The result of all this is that care has increased greatly, with a substantial increase in the various specialties, and the integral community care model has begun to be applied to various selected dental services.

It should be noted, as another achievement of this branch of the public health sector, the fluoridation of the water supply in a number of cities, which should lead to a decline in the incidence of cavities in the coming years. Currently 6 water systems have fluoride treatment, 6 of them having been added in this 5-year period.

School Hygiene

Where hygiene and epidemiology are concerned, the school hygiene sector, which in the course of the 5-year period achieved great success. For example, 79 doctors provided care at 545 schools in 1975 (1 doctor for every 6.8 schools), while 530 nurses' aides, 73 dentists and 42 dental technicians participated. In the next school year the schools served increased to 603 and the number of doctors increased to 108. In the 1978-79 school year, the number of schools receiving care totaled 789, and the medical personnel and nurses' aides totaled 128 and 841, respectively.

The availability of doctors, dentists and nurses at these schools made it possible substantially to reduce the dismissal of students (necessary or otherwise) so that they could be seen at hospitals, polyclinics and dental units, which are often distant from the school centers. Currently, there is 1 doctor for every 3,500 to 4,000 students in boarding schools (for the next 5-year period it is hoped to achieve a ratio of 1 doctor for something over 1,000 students). The number of dentists increased to 139, providing a ratio of 1 dentist for every 5 schools. Psychiatric consultations are also provided at all of the provincial diagnostic and orientation centers, and ophthalmological and eye, ear, nose and throat technicians were available except in the province and city of Havana.

Environmental Health

The national health system pursued a number of activities in the first 4 years of the 5-year period, among which the following might be mentioned:

Water study and control. The health quality of the water supplied by all of the aqueduct systems was checked by periodic inspections of the systems and the taking of samples for physical, chemical and bacteriological analyses. Work was also done on the health protection of water basins which are the sources of supply for large cities.

Study and control of residual liquids and residues. Work was done on the analysis and contaminating effects of residual domestic, industrial and agricultural liquids. The research done on the liquid residues of the production of torula paper, sugar mills, fruit and vegetable products, and at stabled livestock

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centers. The possibility of a system of eliminating solid wastes by means of sanitary fill in the city of Havana, as well as the persistence of DDT in the soil, were studied. In addition, the sanitary study of the waters of the ports of Cienfuegos, Santiago de Cuba and Havana was continued.

Air pollution control. The Cuba Panair Network for the study of atmospheric contamination in the provinces of the country with the greatest problems in this connection was successfully maintained, making it possible to obtain supplementary data on the air contamination situation in Cuba. To this end more than 11,000 samples of contaminants which were checked throughout the 5-year period were processed each year.

The workers serving in this important branch of public health had as their main task providing full medical attention to labor sectors and major development zones on a priority basis, in accordance with the exposure to occupational hazards and the number of workers.

To achieve this goal in the 5-year period, the Institute of Labor Medicine was inaugurated on the central level at the end of 1977. In 1978 the lighting laboratory was completed and outpatient consultations were begun, and in February of 1979 the vocational pathology ward, with 24 beds, was commissioned, and it also provides outpatient consultation. In addition, the number of workers was increased, now totaling 96.

Despite the serious difficulties encountered by this branch, research was carried out to establish and measure the labor risk in various occupations, such as the cutting and hoisting of burned cane, farm machinery, experimental bagasse pressing, the textile industry, mining, welding, exposure to carbon disulfide, pneumatic drill vibration, exposure to heat, energy expenditure, exposure to carbon monoxide, lead and its compounds.

To improve the legal medical aspects of the steps to be taken with workers pending decisions as to whether to return them to or remove them from their work, the legal medical experts methodology was established by means of Resolution 157 of 1978.

Beginning in 1975, residencies for doctors in the labor medicine specialty were established, along with the course for specialized health workers in this branch. This has made it possible to increase the number of specialized technicians and professional workers in labor medicine in recent years. Currently there are 56 residents in training. In 1959 [sic], the total human resources engaged in this specialty in the country exceeded 750 workers.

Communicable Diseases

A basic task in this 5-year period has been keeping a number of diseases which in earlier years caused serious harm to our population at the zero level, and also intensifying activities with a view to the control and possible elimination of other infectious-contagious diseases. During 1978 and 1979, important activities designed to strengthen the work being done in this direction were undertaken, such as:

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Creation of the National Epidemiological Group.

Updating of the existing programs for communicable disease control, and drafting of those not in existence.

Strengthening of the work team of the National Epidemiological Department.

Drafting of the annual epidemiological chart showing the guidelines to be followed for each illness.

Strengthening of the Pedro Kouri Tropical Medicine Institute, to ensure teaching, medical aid and research on exotic diseases and native parasite affliction.

Other activities were also pursued.

Thanks to the vaccinations and the epidemiological vigilance the development of infectious diseases shows the good work done, such that for example, there was only 1 case of poliomyelitis in the entire 5-year period (see table on communicable diseases).

Diphtheria and polio are regarded as eradicated, since only sporadic cases occur, although epidemiological vigilance is maintained for both as a part of the immunization and prevention program being pursued. A steady decline in tetanus cases has been observed, and this is the result of the immunization program directed toward the high-risk groups.

An increase was seen in whooping cough for the first years of the 5-year period, with a decline, finally, in 1979. The number of cases of measles reported has been declining since 1977. The implementation of the approved program throughout the country beginning in 1980 will make it possible to reduce the incidence of cases of these diseases still further.

Tuberculosis has continued to decline. Because of the levels reached, the annual reduction in the rate is lower every year. The city of Havana province accounts for 50 percent of the national problem. Meanwhile, work continued in 1979 on leprosy under the New Leprosy Control Program, the implementation of which began in May of 1977. The basis of this program involves the controlled administration of a medicine which kills the bacteria (Rifampin) throughout the course of the disease. The result, clinically and bacteriologically, can be regarded as highly satisfactory. When the morphological index becomes negative, a theoretical expression of the lack of viability in the bacillus, this result creates a very hopeful expectation as to the real possibility of breaking the chain of transmission.

Where the diseases caused by meningococci (meningitis) are concerned, an increase has been seen in our country since 1978, reflecting a universal phenomenon. This system has required systematic attention by a national commission which has periodically assessed the situation and made recommendations. In 1979 a developing plan was drafted, including the vaccination (A-C) of the groups believed to be at highest risk. To this end, a total of 2,819,697 doses of vaccine were

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administered. It is hoped that with the steps being taken the chain of transmission can be cut and the high incidence in recent years reduced.

Epidemiological Vigilance

The perfecting of the health protection of our frontiers, ports and airports, in order to decrease the risk that any ailment, not only affecting human beings, but animals and plants as well, will be brought into the country has been another giant task in this 5-year period. Internal quarantine systems have been established to avoid the possible spread of disease within the country.

In this connection, the international health control center was established in 1976 in the city of Havana to carry out clinical and laboratory examinations of travelers coming from countries where exotic diseases are endemic. In 1977 and 1978 this center checked more than 20 travelers coming into the country from such zones.

In January of 1979, the Pedro Kouri Tropical Medicine Institute was established as a result of the merger of the Institute of Parasitology and Tropical Medicine and the International Health Control Center. It became a high-level scientific institution, taking responsibility for teaching, training, research and service activities and serving as a base for international epidemiological vigilance with regard to the main diseases of this type.

In addition, special laboratories have been established for the diagnosis of these diseases in the provinces, with the result that the national epidemiological vigilance network has improved in quality and the diagnoses are being made in ever-larger numbers and more promptly.

This year (1980), it has been possible for the first time to establish the number of civilian travelers who were not checked. The total came to 1,500 in the first half of the year. These travelers are later reached in the provinces in which they reside for checking at the provincial laboratories.

In the 5 years between 1976 and 1980, work was basically done on 7 principal state problems (PPE) in public health, covering 110 subjects. Eight bodies and 32 different Scientific-Technical Units (UCT) worked together in carrying out this research.

Generally speaking, the final assessment of the PPE showed a positive achievement on the quantitative and qualitative levels, such that it can be said that the results obtained and the possibilities suggested for introduction and practice total a substantial volume of new activities to be incorporated in the health programs of the country. This will have its effect on the services and morbidity and mortality rates. Also, despite the fact that the study of the PPE subjects did not mean, in the practical realm, the provision of additional resources to the UCT, results were achieved. This shows the spirit of sacrifice and scientific interest on the part of the researchers in the public health sector.

The subjects included in the seven state problems covered in the study of which the MINSAP [Ministry of Public Health] was the leading body were the following:

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Atherosclerosis risk factors in Cuba, with study directed by the Institute of Cardiology and Cardiovascular Surgery, as an UCT. Notable among the results were the definition of various distribution, frequency and combination characteristics of known risk factors for the disease in our population, such as smoking, obesity, sedentary activity, arterial hypertension and diabetes, and their correlation with various clinical manifestations of this ailment.

Disturbances of the upper nervous system. One significant development, among others in this direction, was the drafting of a program to ensure better control of epilepsy in the country, as well as the study of rehabilitation of chronic schizophrenia. This research was headed by the Institute of Neurology and Neurosurgery.

The microclimate and its relation to health and worker productivity in the sugar industry. Within this PPE, the Institute of Labor Medicine, as the head unit, defined methodological criteria for the evaluation of microclimatic conditions in labor situations and establishing the psychophysiological condition of the worker exposed to excessive heat, with a view to safeguarding his health and increasing his well-being.

Bases for a nutritional survey of the population. Notable results in the study of this PPE were the determination of cultural characteristics, eating habits and nutritional knowledge among our people making it possible to define the basic criteria for the drafting of a domestic nutritional education program. The National Institute of Hygiene, Epidemiology and Microbiology took charge of this problem.

Initial changes in diabetes mellitus in the population with some risk factors. The Institute of Endocrinology and Metabolic Diseases headed the study of this PPE, and among the most important results were the discovery of the usefulness of the conjunctival biomicroscopic method for the early diagnosis of diabetes mellitus, with the establishment of norms in this connection allowing its generalized use in ophthalmological departments in the country. A simple mechanism making it possible to measure the cutaneous and conjunctival capillary fragility very exactly and to establish the normal values for the country was designed and built.

Diagnosis and planning in the health system. Notable in this sector was the drafting of a system of definitions for statistical and planning use in health which was introduced in the national statistics information system of the State Statistics Committee and the supplementary information system of the Ministry of Public Health. These definitions were also included in the dictionary of social hygiene and statistics currently being prepared by the CEMA [Council for Mutual Economic Assistance]. This important work was done by the Health Development Institute.

Experimental and clinical cancer chemotherapy. The Institute of Oncology and Radiobiology took charge of this research, through which new substances with experimentally demonstrated effectiveness against tumors were obtained, by means of sifting and synthesizing marine invertebrates and plants. Moreover, a method

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making it possible to synthesize on a laboratory scale a modern cytostatic agent very effective in different neoplasia sites and difficult to obtain on the market was developed.

All of the principal state problems which were researched in this 5-year period have as their immediate work prospect the task of introducing the results into medical practice, to which end a whole plan is being drafted.

Pharmaceutical Production

Another important branch of public health in which excellent results have been achieved in these 5 years is the pharmaceutical industry, which has seen an average annual growth of 4.5 percent in its production plan. This has made it possible to supply approximately 85 percent (in value) of the demand for medicines in the country with domestic production, with the remaining 15 percent covered by imports.

Currently it can be said that quality control in the pharmaceutical industry is assured by the work of 89 professionals: 67 chemists, 17 microbiologists and 5 biologists, in addition to 110 middle-level technicians, all distributed in the 3 central chemical, microbiological and pharmacological laboratories, as well as the 10 chemical analysis laboratories at the enterprises which produce medicines. In the rest of the technical activities, the increase in the skilled work force has contributed to the qualitative development of the pharmaceutical industry.

The technological development, rationalization and modernization carried out in industry has made it possible to use technologies and equipment with high productivity and low costs, such as for example the equipment for grinding and mixing pills with liquefied coatings, machines to inspect ampules (a process formerly done by hand), machines to wash and sort ampules, semi-automatic machines to fill bottles with oral medicines and serums, and others. Along with this new types of containers have been introduced, such as the so-called "blister," also in the presentation of tablets in pharmaceutical form, and other types of containers such as flasks for liquids, suspensions, eye washes, salves, etc, will be modernized in the course of the next 5-year period.

The Cuban pharmaceutical industry has a plan for the development of raw materials, such as steroid substances, semi-synthetic antibiotics, prostaglandins, blood derivatives, opotheratic products, medicinal plants and others. Also a plant for the production of semi-synthetic antibiotics is being built, and in one of the enterprises equipment is being installed for the production of hecogenin (an agent for the production of corticosteroids), obtained from the juice of the agave plant.

Another achievement in the Cuban pharmacopia is the development of production of products derived from blood: serum albumin, gammaglobulin and blood classification serums. In addition, with the technical aid of the USSR, a plant is being built which will make possible optimal use of the blood donations our people make voluntarily through the CDR [Committees for the Defense of the Revolution].

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New technologies have been developed, among which we might note those for the production of hormones, chorionic and growth gonadotropins, and a pigmentary substance used for vitiligo. Meanwhile, in studies on the uses of marine resources, the pharmaceutical industry has succeeded in extracting a substance (PGA₂) from the coral on our coastline, which can be converted chemically into a prostaglandin for veterinary use in regulating the periods of rut in cattle.

During this 5-year period, 2 machines for the mechanized production of hygienic pillows were installed, and also a modern structure to accommodate the production of both lenses and frames was built and production of protective goggles was begun. A plant was built in Oriente for the production of adhesive bandages.

The domestic and international agreements on economic and scientific-technical collaboration, as well as integration of the pharmaceutical industry in the work sections of the CEMA have contributed to the advancement of our technicians, which in turn has made available two programs for the accelerated development of science and technology, the Sub-Program 14 and the PPP entitled "Obtaining Medicines and/or Potential Medicines From Natural Substances in the Country."

Achievements in Education

During the 5-year period just ending there have been significant achievements on the methodological teaching front of the MINSAP, thanks to systematic and intensive work. Among these we might mention:

The conversion of the former faculties of medicine into higher institutes of medical science; the drafting of new study plans for the medicine, dentistry and licentiate in nursing specialties; considerable advances in the implementation of the Marxist-Martí principle of combining work with study through the familiarization and service practices; providing a program and methodological norms for teaching for the sixth year of medical studies---rotating internship.

Also during the 5-year period the editing, printing and distribution of basic textbooks in the Medical Student Collection by Cuban authors was begun. Currently 20 authors' groups with a total of more than 70 specialists with the highest qualifications and teaching experience are at work in the various medical science disciplines.

And the most important thing is that in this 5-year period, 4,688 new doctors, 1,055 dentists and 10 nursing licentiates have graduated. Also new specialties were established for post-graduate degrees, such as for example in the following disciplines: human anatomy, normal and pathological physiology, embryology, histology, clinical biochemistry, genetic chemistry, pharmacology and immunology, all in the basic sciences, while in the clinical disciplines, physical medicine and rehabilitation have been added. State boards were established for the grade-level examinations in the specialties, thus improving the quality and the exigency of the examinations. During the 5-year period, 3,326 doctors and dentists graduated as 1st-level specialists in 53 different specialties. This figure represents 62 percent of all the specialists graduated in the country since the time of the revolution.

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It should be noted that there were also a steadily increasing enrollment by professional personnel in the body with a view to higher scientific degrees, both domestically and abroad, an aspect which was practically non-existent in the preceding 5-year period.

In this public health branch of education other real achievements in this 5-year period can be included, such as the consolidation of the national sub-system for middle-level medical teaching; the establishment of the polytechnical health institutes; the building of 10 new school institutions which can accommodate an additional 7,200 students (2 of them will be inaugurated shortly); the graduation of approximately 22,200 aides, nurses and middle-level technicians; the revision and updating of study plans and programs and the raising of the entry requirements for the health technical careers to the 9th- and 12th-grade levels.

A very significant achievement in the teaching sector (combined education sub-system) is the achievement in these years of the organization and systematizing of a plan on the national level which will incorporate all professional workers and technicians in constant advancement as a function of the national health system itself. The plan was developed on the basis of courses, workshops, lectures, individual training and audiovisual educational programs, with more than 200,000 participants per year. As a specific example, it might be mentioned that from 1961 to 1975, 2,685 nurses and middle-level technicians completed post-basic courses throughout the country, while in this 5-year period alone the total number of graduates reached 2,628.

Education also played an important role in training, the main goal of which is to train, educate, improve and update the knowledge of the workers and cadres in general in the public health sector. This training was carried out in the course of the 5-year period by means of numerous activities, among which we might mention the battle for the 6th-grade level, in cooperation with the trade unions; development of orientation and training courses for workers, administrators and service personnel; the training of skilled workers for the health sector and middle-level technicians for health protection and hygiene, accounting and planning; as well as others, making it possible to carry forward the optimization of services in a large number of units.

Real Advance

The real successes achieved in the public health sector reveal an effort by its workers during the first 5-year period, but this does not mean that everything has been done. Problems still exist in this sector which is so directly linked with man's health, since the health and strength of our population depends on this sector, and since the well-known phrase "achieving optimization in medicine" means nothing other than an effort, fulfillment and organization for the good of all. The second congress is approaching and new tasks will fall upon the shoulders of the health workers, but will they be capable of carrying them out? Will they be capable of surpassing the success achieved in this 5-year period? If it is possible to measure the spirit of sacrifice and determination of the men and women in this sector, we believe that the answer obtained will be in the affirmative.

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New Human Resources

| <u>Graduates</u> | <u>Number</u> |
|--|---------------|
| Doctors | 4,688 |
| Dentists | 1,055 |
| Licentiates in nursing | 10 |
| Nurses, aides and middle-level technicians | 22,200 |

Hospitals Completed During the 5-Year Period

| | <u>Beds</u> |
|---------------------------------|-------------|
| Cienfuegos | 616 |
| Las Tunas | 629 |
| Guantanamo | 750 |
| Manzanillo | 616 |
| <u>Expanded</u> | |
| Frank Pais (City of Havana) | 200 |
| Heroes of Baire (Isle of Youth) | 200 |

Hospitals Nearing Completion

| | |
|--------------------------------|-----|
| Havana Central | 946 |
| Pinar del Rio | 630 |
| Villa Clara | 630 |
| Moron | 630 |
| Sancti Spiritus | 630 |
| Santiago de Cuba | 630 |
| Contramaestre | 300 |
| Puerto Padre | 300 |
| Nuevitas | 300 |
| San Cristobal | 300 |
| Expansion of Holguin Pediatric | 300 |

Dental Treatment

| <u>Type of Service</u> | <u>1975</u> | <u>1979</u> |
|------------------------|-------------|-------------|
| Basic | 5,826,000 | 6,839,000 |
| Endodontic | 177,000 | 232,000 |
| Periodontal | 98,000 | 239,000 |
| Oral surgery | 64,000 | 86,000 |
| Prosthesis | 552,000 | 848,000 |
| Orthodontic | 320,000 | 437,000 |
| Other | -- | 267,000 |

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Fillings and Extractions

| | | |
|-------------|-----------|-----------|
| Fillings | 4,861,000 | 5,755,000 |
| Extractions | 2,730,000 | 2,653,000 |

Development of Communicable Diseases

Cases Reported

| <u>Disease</u> | <u>1975</u> | <u>1976</u> | <u>1977</u> | <u>1978</u> | <u>1979</u> |
|----------------|-------------|-------------|-------------|-------------|-------------|
| Diphtheria | 1 | 1 | 1 | 1 | 1 |
| Tetanus | 67 | 58 | 56 | 37 | 30 |
| Whooping cough | 326 | 139 | 978 | 1,465 | 147 |
| Poliomyelitis | -- | -- | -- | -- | 1 |
| Measles | 10,528 | 14,882 | 25,358 | 18,769 | 7,488 |

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COUNTRY SECTION

CUBA

ACHIEVEMENTS OF EXPERIMENTAL STATION IN LIVESTOCK SECTOR REPORTED

Havana BOHEMIA in Spanish 12 Dec 80 pp 90-91

[Article by Concepcion Duchesne: "The Indio Hatuey Experimental Station for Animal Feed and Fodder"]

[Text] The need for research centers in connection with the increasing development of livestock breeding led to the establishment of the Indio Hatuey Experimental Station, which began work on 8 March 1962 and has become one of the leading agricultural research centers in the country.

It began as a special plan under the supervision of the former National Institute for Agrarian Reform (INRA) and the Central Planning Board (JUCEPLAN). In December of 1967, it was transferred to the University of Havana, under the responsibility of the vice rector for animal sciences. Currently, it is the responsibility of the rector of the Matanzas University Center, and it maintains relations with the Academy of Sciences of Cuba, with regard to methodology, and with affiliates of the academy such as the Institute for Basic Research in Tropical Agriculture (INIFAT), for working purposes.

Initially, it engaged in studies of pasturage and fodder, and later the field of research in animal feeds was expanded.

The search for pasturage and fodder species of higher quality and greater productivity is implicit in the prospects for the potential improvement of our livestock, since the native species are not characterized by these qualities.

In pursuit of this principle, the work of this center has been focused on the introduction and collection of a large number of species and varieties of gramineous and leguminous plants.

In addition, experiments are carried out, covering evaluation, agrotechnology and plant nutrition, with projects designed to satisfy the agronomical parameters such as to be able to resolve our production problems.

Later, studies of cattle and sheep were introduced, as a supplement to the evaluation of feeds, and not only along those lines, but also, due to the need to resolve the shortage of feed in the dry season, experiments with a view to finding better systems of raising livestock were also pursued.

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The main purpose of the station is to establish ever-closer links with production for its improvement, as well as to establish relations with producers by various means, through technical aid, the organization of courses for updating the knowledge of professional and technical workers, and mutual participation in technical meetings and events and in the process of popularizing research results and introducing them into production.

With an experimental area of 244.23 hectares, the station also has a network of fields for the evaluation of pasturage in the other provinces, and it relies on the cooperation of a number of production centers, in addition to installations which participate directly or indirectly in the experimental work.

Structure of the Center

We can understand all of the activities of the center through a knowledge of its structure.

It has a general director, two subdirectorates, one for research and the other for economics and services, and three research departments, the focus of the work of the station.

1. Introduction and Improvement of Pasturage

This department devotes itself to research and evaluation, on request, and the search for gramineous and leguminous plants, as well as genetic improvements through hybrid development of plant varieties.

Currently, the research work is focused on the selection of nursery specimens of the most promising and productive forage varieties, among which we might mention *Panicum maximum* (Jac. CV. Likoni), a variety of guinea grass.

2. Department of Agronomic Studies

This department studies the methods of planting and establishing forage crops. It determines the proper methods for maintaining the renewal of pasturelands, and studies methods of irrigation and fertilization and techniques for seed production.

3. Pasture Management and Utilization Department

Among its other main functions, this department determines the potential of pastureland for dairy and meat production. In addition, it studies the norms for pasture management, basic selection systems and the methods of maintaining pasturelands for forage during the dry season.

Post-Graduate Department

The goal of this department is to sponsor post-graduate studies for the center researchers themselves, and to organize refresher courses for professional workers in production and the training of undergraduate students specializing in pasture crops as agronomical engineers.

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Scientific-Technical Information Section

This section has the responsibility of popularizing the results of the research of a scientific and technical nature at the center, through articles drafted especially for the purpose by various researchers for the publication of the periodical PASTOS Y FORRAJES.

International Relations

The relations maintained with institutions in other countries are implemented by means of joint investigations and the exchange of missions and technical aid, through the Ministry of Agriculture.

There are working links with the socialist countries, mainly the Soviet Union, through direct contact with the Stavropol Agricultural Research Institute, the Moscow Pasturage Institute and the Patrice Lumumba People's University, with which various kinds of work are pursued, along with the technical aid permanently provided by the assignment of Soviet experts to the station for 1 or 2 years. This form of work is also pursued with the Socialist Republic of Hungary.

Relations with the GDR Academy of Sciences Genetic Forage Improvement Institute are being expanded.

There are cooperation agreements with the CRAAG in Guadeloupe and the National Institute of Scientific Research (INRS) in France. This is the capitalist country which has maintained international relations with the center for the longest time, 10 years now. In addition, there is an exchange of technical aid and materials with Australia.

In the realm of contacts and relations with agricultural institutes in Latin America and the Caribbean, there is a great potential for expansion, because Cuba is a member of the Latin American Animal Production Association.

Currently there are exchanges of scientific information, publications, biological materials and technical aid in terms of visits by technicians. Cuban specialists have attended 3- to 6-month training courses at the International Center for Tropical Agriculture (CIAT), which has its headquarters in Cali, Colombia. The main aim of this center is to obtain idioplasm, i.e. types of forage species from the entire tropical and subtropical area in Latin America and the Caribbean.

Technical Personnel

Professional workers with university degrees, including agronomical and livestock breeding engineers, licentiates in chemistry and biology, and doctors of veterinary medicine. Two of them are candidates for doctorates in agricultural sciences and 10 are in the process of qualifying for candidacy.

The entire staff of the center comes to a total of 200 workers.

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Achievements in the 5-Year Period

All the work of the station in this 5-year period has been pursued within the context of the principal state problem, the Academy of Sciences of Cuba definition for scientific-technical research. This station worked on establishing a feed base for cattle (problem 0-11), fundamentally based on pasturage and forage.

1. Creation of a network of pasturage evaluation fields in 14 livestock zones in the country, which has made it possible to make recommendations for the creation of a first table of pasturage and forage varieties, based on soil and climatic conditions in the country.

2. Recommendations have been made on the production of feeds and the re-establishment of stoloniferous plants which grow runners, and pastureland rehabilitation methods for three types of soils, as well as the use of phosphorus and potassium for red, feriferous soils and methods for the production of feeds of the guinea and gama grass species.

3. Recommendations have also been made on systems for producing milk under irrigated conditions with crosses of Bermuda grass and systems for producing milk without irrigation, with pangola grass.

4. Systems of raising calves and growing animals on the basis of pasturage and forage.

5. The technical norms for the preservation of fodder without the use of honey were established, which will lead to great economic savings.

6. From the qualitative point of view, these results have been included in 31 extension proposals submitted to the Ministry of Agriculture, 4 of which are in the process of general implementation.

7. The species or fodder types recommended for production include the Likoni strain of guinea grass and the "biloela" strain of buffalo grass.

Prospects

A process of consolidation and development of the center in depth as a scientific body.

Plans call for the expansion of the field of study in the next 5-year period, covering the same aspects--pasturage and fodder and feed for livestock, but including a group of questions not dealt with or dealt with only in part to date such as the work of maintenance and management of pastureland, the effective use of leguminous crops in livestock breeding, and the definition of the basic systems of production for our natural climatic and soil conditions.

In another connection, it is hoped that in this 5-year period at least 10 researchers will earn their scientific degrees as doctors of agricultural sciences, in order to raise and consolidate the scientific level of the station.

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The development of the closest possible links with production will continue to be stressed, expanded and deepened, such that the results will be a function not only of scientific and technical achievements, but their practical application to dairy and meat production as well.

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